SPECIFICATION AMENDMENT

Page 1 – please replace paragraph 2 entitled "Incorporation by Reference" by substituting the following replacement paragraph with markings to show all changes by strikethrough and underlining.

> This application is a continuation-in-part of copending application USSN 10/770,307, FILED February 2, 2004, which claims priority to U.S. Provisional Application Serial No. 60/466,523 entitled "METHOD FOR IMPROVING EFFICIENCES IN LIVESTOCK PRODUCTION", filed April 29, 2003, and U.S. Provisional Application Serial No. ~~60/509,775~~ 60/509,755 entitled "METHOD FOR IMPROVING FEED CONVERSION EFICIENCE IN LIVESTOCK PRODUCTION", filed October 8, 2003. This application also claims priority to Canadian Patent Application No. 2/422,437 entitled: "IMPROVING PROTEIN AND MILK PRODUCTION OF DAIRY HERDS", filed March 18, 2003 and to U.S. Provisional Application Serial No. 60/456,489 entitled: "PROTEIN AND MILK PRODUCTION OF DAIRY HERDS", filed March 21, 2003. The foregoing applications, and all documents cited therein or during their prosecution ("appln cited documents") and all documents cited or referenced in the appln cited documents, and all documents cited or referenced herein ("herein cited documents"), and all documents cited or referenced in herein cited documents, together with any manufacturer's instructions, descriptions, product specifications, and product sheets for any products mentioned herein or in any document incorporated by reference herein, are hereby incorporated herein by reference, and may be employed in the practice of the invention.

Page 52 – Please replace the third full paragraph b substituting the following replacement paragraphs with markings to show all changes by strikethrough and underlining.

Further, the invention provides a method of using oligonucleotide primers ~~(SEQ ID No.4 & SEQ ID No 3)~~ (SEQ ID No. 4 & SEQ ID No. 5) based on this DNA sequence in a polymerase chain reaction (PCR) assay to distinguish livestock animals homozygous for mutant alleles of the *ob* gene (*ob*$^-$*lob*$^-$ or TT animals), which alleles encode an altered leptin, from livestock animals heterozygous for mutant alleles of the *ob* gene (*ob*$^-$ *lob*$^+$ or CT animals) and livestock animals homozygous for wild-type alleles of the *ob* gene (*ob*$^+$*lob*$^+$ or CC animals).

Page 52 - Please replace the fourth full paragraph b substituting the following replacement paragraphs with markings to show all changes by strikethrough and underlining.

In another embodiment, the invention provides a method of using primers having ~~SEQ ID No.2 & SEQ ID No 3~~ SEQ ID No. 4 & SEQ ID No. 5 based on this DNA sequence in a polymerase chain reaction (PCR) assay to distinguish livestock animals homozygous for mutant alleles of the *ob* gene (*ob*$^-$ *lob*$^-$ or TT animals), which alleles encode an altered leptin, from livestock animals heterozygous for mutant alleles of the *ob* gene (*oh*$^-$ *lob*$^+$ or CT animals) and livestock animals homozygous for wild-type alleles of the *ob* gene (*ob*$^+$*lob*$^+$ or CC animals), wherein detection of the PCR amplified fragment is by detection of a radioactively labeled nucleotide that is incorporated into the PCR amplified product.